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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/05/2005

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EXAMINER

TESKIN, FRED M

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,988

Applicant(s)

VAN EGMOND ET AL.

Examiner

Fred M. Teskin

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 091304.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

The reply of January 31, 2005, has been entered and obviates the objection and Section 112 rejection set forth in the prior Office action.

The previously indicated allowability of claims 1-15 and 17-33 is withdrawn so that the following new grounds of rejection may be entered.

Claims 9-15 and 17-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 9, 17 and 26 each recite an "intermediate grade propylene stream", which applicants' specification (parag. 0017) defines as containing "less than 99.5 wt% propylene". In view of this stated definition, it is unclear how the express recitation of the very same weight percent propylene in dependent claims 10, 20 and 28 adds any substantive limitation. And to the extent these claims do further limit the scope of their respective parent claims, the question becomes: what propylene concentrations above 99.5 wt% are intended to be embraced by claims 9, 17 and 26? Clarification and appropriate correction are required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6660812 to Keuchler et al.

The claimed invention is a process for making polypropylene, comprising the steps of:

- a) contacting an oxygenate stream with an olefin forming catalyst to form an olefin stream:
- b) separating an intermediate grade propylene stream from the olefin stream, wherein the intermediate grade propylene stream contains less than 99.5 wt% propylene, based on total weight of the stream;
- c) contacting the intermediate grade propylene stream with a polypropylene forming catalyst to form polypropylene and unreacted by-product; and
- d) removing propane from the unreacted by-product to form at least one purge stream and a propylene containing recycle stream.

Keuchler et al disclose a process for making polypropylene which differs from the claimed invention only in that removal of propane from the unreacted by-product to form at least one purge stream is not explicitly taught. See, column 2, lines 45-68; column 18, lines 18-31 and column 26, claims 45, and 51-53. The patentees' "vent stream", removed from the polypropylene reaction unit, is seen to correspond to the "unreacted by-product" formed in step c) of applicants' process. Indeed the vent stream is taught to contain unreacted olefin feed stocks, by-products and inerts including paraffins. See

Art Unit: 1713

column 19, lines 25-30 and 50-55, where *propane* is named as one of the inerts included in the vent stream.

The desirability of removing at least a portion of the non-olefin compounds from the vent stream is then discussed (*Id.*, lines 56+). In a preferred embodiment, it is stated that at least 50 wt% of the total of inerts and paraffins in the vent stream are removed through a *purge stream* (col. 20, ll. 5-11). This would have led one of ordinary skill to remove a portion of inerts and paraffins from the vent stream removed from the polypropylene reaction unit of Keuchler et al. Further, from the claimed embodiments describing the propylene containing product stream as containing defined quantities of propane (e.g., 0.1-50 wt % propane, per claim 51), one would have directed to remove this particular inert/paraffin from the vent stream via a purge stream in accordance with the patentees' preferred embodiment discussed above.

Accordingly, at the time of applicants' invention, it would have been obvious to one having ordinary skill in the art to modify the polypropylene-producing process of Keuchler et al by removing propane from the vent stream removed from the polypropylene reaction unit to form a purge stream along with a propylene recycle stream.

The limitations of the dependent claims rejected likewise are disclosed by Keuchler et al or obvious from the teachings thereof.

Thus, the propylene concentration ranges of claims 3-6 are taught at, e.g, column 18, lines 20-30. The use of Ziegler-Natta and metallocene polymerization catalysts, per claim 7, is discussed in the same column, lines 46+; and application of

Art Unit: 1713

distillation separation to the vent stream, per claim 8, is proposed at column 20, lines 8-16.

Claims 9-15 and 17-33 would be allowable if amended or rewritten to overcome the rejection under 35 U.S.C. 112 set forth in this Office action.


In view of the new grounds of rejection not necessitated by amendment, this action is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/04-17-05


FRED TESKIN
PRIMARY EXAMINER
1713